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## ABSTRACT OF THE INVENTION

A model and method that incorporates software into a network availability model is disclosed. An availability model models a platform having at least one software component having different classes of failures. The platform is within a network. The availability model includes a platform model for the platform parameters. The model also includes a software availability model within the platform model. The software availability model includes an aggregate failure rate for each of the classes of failures. The software availability model also includes an aggregate repair time for each of the classes of failures.